

REMARKS

The above application was filed on March 23, 2006 with original claims 1-12, and a preliminary amendment cancelling claims 1-12, and new claims 13-22. In a first office action, a language objection is raised, as are anticipation and obviousness rejections regarding all claims. By way of this response, claim 13 is amended. Accordingly, claims 13-22 remain pending and at issue. In light of the foregoing amendment and the following remarks, reconsideration and allowance of the claims is respectfully requested.

On page 2 of the outstanding office action, the Examiner refers to *In re Hutchinson*, 69 USPQ 138 (CCPA 1946) and notes that the use of the phrase “adapted to” does not constitute a positive limitation in a patentable sense in claims 17, 18 and 21. However, later case law held that the use of the phrase “adapted to” should not be disregarded *per se* and can positively limit the claimed subject matter in a patentable sense if the phrase constitutes a structural limitation on that subject matter. *In re Venezia*, 530 F.2d 956, 958-959, 189 USPQ 149, 151-152 (CCPA 1976); *Pac-Tec Inc. v. Amerace Corp.*, 903 F.2d 796, 801, 14 USPQ2d 1871, 1876 (Fed. Cir. 1990). Claim 17 uses the phrase “adapted to” to specify a virtual wireless computer network having the structural limitations of slow moving stations which operate within regions, and fast moving stations moving between regions. Similarly, claim 18 uses the phrase “adapted to” to specify a virtual wireless computer network having the structural limitations of a network which serves as a safety alert system and provides advice to the operator of a station of the presence of other stations that may be in the immediate proximity thereof. Claim 21 does not use the phrase “adapted to”. As the phrase “adapted to” used in each of claims 17 and 18 constitutes a structural limitation to the subject matter disclosed, the language of claims 17 and 18 positively limits the subject matter in a patentable sense, and therefore, the objection should be withdrawn.

Furthermore, *Ex parte Ollar* finds that if any interpretation of the claimed subject matter can be found in the specification, then use of the phrase “adapted to” can still be a valid limitation. *Ex Parte Ollar*, Appeal No. 94-3182, Application Number 07/899,707. Such interpretations of the structural limitations of claims 17 and 18 can be found throughout the specification of the present application. For example, with respect to claim 17, paragraph

[0023] of the published application, with reference to FIG. 2 of the present application, describes the claimed slow moving agents, or people 1, as operating within the respective regions, or zones A-E, while the claimed fast moving agents 2 are disclosed as moving between the zones A-E along a long chain outline. With respect to claim 18, paragraphs [0029]-[0032] of the published application disclose the claimed network as a truck safety alert system designed “to safely manage the interaction between a truck and other objects in its environment using the capabilities of the ad-hoc wireless network.” Using such a network, “a truck will know the position of each object in its safety zone by direct communication with that object or through retransmission from a neighbor agent.” As interpretations of the subject matter of claims 17 and 18 are sufficiently disclosed throughout the specification, the phrase “adapted to” used in each of claims 17 and 18 specifies valid limitations. Accordingly, for this reasons as well, the objection should be withdrawn.

Turning now to the first prior art rejection, claims 13-18 and 21 stand rejected as being anticipated by WO 02/25968 (“Troemel”). To anticipate a claim, MPEP §2131 requires that a single prior art reference must disclose each and every limitation of the claim. Applicants believe that each of the pending claims includes one or more elements that are not disclosed by Troemel, thereby overcoming the aforementioned rejection, as discussed more specifically below.

As currently amended, claim 13, as well as claims 14-22 dependent thereon recites a virtual wireless computer network including a plurality of stations arranged to interface with each other by wireless communication in two or more regions and *within* each region. At least one of the regions is beyond normal wireless communication range of the other regions, and at least one station is a mobile station able to travel between the regions. The claimed mobile station is adapted to receive and/or transmit information by wireless communication in one region when in that region, and receive and/or transmit information to other regions when in those regions.

Troemel fails to disclose such elements. Troemel discloses a method to provide a wireless internet system for the mobile environment which employs mobile transceivers with small coverage areas to pass data along a virtual data pipe to low power stations with external networking capabilities. However, the virtual data pipe of Troemel is only created when one station or agent wishes to communicate with another agent via a base station. Specifically, page 4, lines 23-27 of Troemel discloses that “[w]hen a data link to an outside network is requested, the invention will calculate a virtual data pipe to the nearest base station. The low power base stations act as “data depots” for the data to be transferred to the Internet or other outside network.” In contrast, the present application teaches the use of ad-hoc networks for intra-network communication as well as communication with a base station through fast moving agents traveling between networks, as in the truck safe. As disclosed in paragraphs [0029]-[0032] of the present application, the truck safety feature relies on intra-network communication. Functionality can therefore be achieved in the present application without any use of base stations, whereas every embodiment of Troemel requires data pipes and associated base stations. Accordingly, Troemel fails to disclose a virtual wireless computer network which includes a plurality of stations arranged to interface with each other in two or more regions, as well as within each region.

As Troemel does not teach or suggest every element of independent claim 13, as well as claims 14-22 dependent thereon, Applicants respectfully submit that the anticipation rejection based upon Troemel is improper and must be withdrawn.

Furthermore, claims 19, 20 and 22 stand rejected as being obvious over Troemel in light of U.S. Patent No. 5,375,059 (“Kyrtos”). To support an obviousness rejection, MPEP §2143.03 requires “all words of a claim to be considered” and MPEP § 2141.02 requires consideration of the “[claimed] invention and prior art as a whole.” Further, the Board of Patent Appeals and Interferences recently confirmed that a proper, post-KSR obviousness determination still requires the Office to make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” *See, In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995). Applicants believe that none of the proposed combinations of the prior art

discloses every limitation of the pending claims, thereby overcoming the aforementioned rejections, as discussed more specifically below.

In particular, the Examiner asserts that Troemel teaches every limitation of the claimed virtual wireless computer network except for stations wherein the velocities and positions of each of the stations are taken into account to provide warnings of possible danger, as specified in claims 19 and 20, and a network for use in a mining environment, as specified in claim 22. The Examiner thus relies on Kyrtos to supply all of the deficiencies of Troemel. Moreover, the Examiner cites Kyrtos to supply Troemel with speed control and autonomous versus manual control, as well as a network for use in a mining environment. Troemel has been previously discussed as failing to disclose each and every limitation of the pending claims. Kyrtos also fails. Specifically, Kyrtos fails to disclose a virtual wireless computer network having a plurality of stations that are arranged to interface with each other by wireless communication in two or more regions and *within* each region.

As the combination of Troemel and Kyrtos does not teach or suggest all of the claim limitations of independent claim 13, as well as claims 14-22 dependent thereon, Applicants respectfully submit that the obviousness rejection based upon Troemel and Kyrtos is improper and must be withdrawn.

Applicants respectfully submit that all rejections have been traversed, that this application is in a condition for allowance and an early action so indicating overcome should be issued. Should the Examiner have any questions, he is respectfully invited to telephone the undersigned at the number listed below.

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Respectfully submitted,

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